VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Please replace the paragraph in the FIELD OF THE INVENTION, with the following rewritten paragraph:

[0001] This invention relates to hand held multi-bit screwdrivers having tool bits retained within a housing in a retracted position, and being movable to an extended position for subsequent use.

Please replace the paragraphs in the BACKGROUND OF THE INVENTION, with the following rewritten paragraphs:

[0002] Various types of multi-bit drivers are presently available in the market that provide a plurality of readily available tool bits in a single easy-to-use multi-bit driver which minimizes the time for bringing a tool bit into and out of operation and also decreases the time for selecting one tool bit from another.

[0003] One such multi-bit driver is disclosed in U.S. Patent 3,750,729 issued August 7, 1973 to Lemieux and entitled Multiple Driver Tool. This multi-bit driver has a chamber for holding a plurality of drivers (also commonly known as tool-bits) for

screws and the like. For each driver, a guided slide is retained in a co-operating guide track channel for movement between a retracted position and an extended in-use position, and is connected to the driver by an elongate connector. In the extended in-use position, the driver extends through a passage at the forward end of the chamber and projects forwardly therefrom.

[0004] An annular wall that defines the chamber tapers inwardly to the inner end of the passage. When any one of the drivers is moved forwardly along the chamber towards its extended position, its outer end is guided into the inner end of the passage by the tapered annular wall. This is the specific means that is provided for guiding each of the drivers into the passage, as specifically stated at column 2, starting at line 57, and is the only guiding means taught. There is no other means taught that guides the selected tool bit into the passage when the tool bit is moved to its extended position.

[0005] In order for the driver to be guided into the passageway, the connector that connects the slide to the driver must be sufficiently flexible to follow along the tapered annular wall of the housing to the passage. The flexible connector in the shape of a tube formed of strip of material is tightly wound in the form of a helix. The material is either metal or suitable plastic, thus providing a comparatively rigid but bendable connector, as specifically stated at column 2, lines 45 and 46. A helically coiled spring surrounds each

connector to bias the connector and attached driver to a retracted position, yet still allow the connector to be equally flexible in all directions.

[0006] It can be seen that the connector with the spring around it has an effective cross-section that is radially consistent. In other words, the effective shape and diameter of the connector is the same in any radially direction away from the axial center. Accordingly, the connector bends consistently in any angular direction. No provision has been made for causing or allowing the connector to bend more in one angular direction than in another angular direction, or to resist bending in more in one angular direction than in another angular direction.

[0007] Depending on the orientation of the entire device, this angular deflection in any direction may cause the driver to try to enter the passage from a skewed direction when the driver is moved towards its extended position, which is highly undesirable, since the driver might tend to jam against the annular wall. This potential problem is heightened by the fact that the working end of the driver may have a shape (such as a wide slot screwdriver bit, or other Philips or Robertson screwdriver bits) that readily catches on the entrance to the passageway at the termination of the tapered annular wall, or catches on the annular wall, as the driver is being moved to its extended position.

[0008] Another problem with the multi-bit driver disclosed in the Lemieux patent is that in order to preclude rotation of the driver with respect to the housing, it uses round tool bits having two radial keys disposed on the back end of each tool bit. Each key engages a co-operating slot formed in the housing and extending radially outwardly from the passage. With such an arrangement, the two keys must fit closely into the respective slots, or else the driver will be loose during use, which is unacceptable. Accordingly, the slots must be only marginally wider than the respective key, thus making insertion of the key into the slot an operation requiring precise alignment. Although the drivers are constrained such that each of the keys generally aligns with the respective slot when the drivers are in their retracted positions, the keys may readily be displaced out of proper alignment by uncontrolled deflection during movement to the extended position. This is caused, at least in part, by the overall flexibility of the connector that connects the driver to the slide.

[0009] This particular problem is even greater in multi bit drivers that employ hexagonally shanked drivers. Such hexagonally shanked tool bits must register and align almost perfectly with the co-operating hexagonal bit receiving channel in the bit chuck, otherwise the selected tool bit will not slide through the bit chuck into its extended position. Only very minimal deflection or twisting of these tool bits as they are urged from their retracted position to their extended position can be tolerated, as the edges of the hexagonal flutes will

catch on the inner wall of the bit chuck, adjacent the back end of the hexagonal bit receiving channel. Since the tool bit shank is hexagonal, the bit extension must have qualities that minimize twisting to ensure proper tool bit insertion into the channel. The bit extension needs to be flexible in the radial direction and rigid in the transverse direction, ensuring the driver is inserted into the channel the same way each and every time, thereby greatly reducing the chance of jamming.

[0010] Another disadvantage of the constant cross-section connectors as disclosed in the Lemieux patent, is that since they are equally flexible in all radial directions, there is the definite possibility of lateral flexing of any extended drivers. Accordingly, a driver that is partially extended could readily tangle with the other drivers.

[0011] U.S. Patent 5,325,745 issued July 5, 1994, to Koehler, discloses a Screwdriver, wherein extensions from the bits (referred to as drivers in the Lemieux patent and commonly referred to as tool bits) are not of a constant cross-section, in order to provide increased flexibility in a direction aligned radially with its central longitudinal axis. The screwdriver as taught has a plurality of bit assemblies retained within the hollow interior of a housing. Each bit assembly has a bit with a rearwardly disposed hexagonal end. A leaf spring is attached to the central portion of the bit and extends laterally outwardly to terminate in a thumb piece disposed externally to the housing. In use, the thumb piece is manually slid forwardly

until it abuts against the leading end of its slot. It is then pushed radially inwardly, in a transverse direction to the original movement, so as to move the hexagonal end of the bit immediately in front of a cooperating hexagonal recess. In order to accomplish this radially inwardly directed movement, the leaf spring must be quite flexible in that direction, and not stiff. Accordingly, it could not be used in the multi-bit driver as specifically taught by Lemieux, which requires a stiff yet still bendable connector. It can be seen from the usage description that engaging a bit requires numerous cumbersome steps. In addition the back of the bit must be perfectly aligned with the hexagonal recess before fitting the bit shank into the recess is possible.

[0012] There is a need for a multi-bit driver that is easily used, allows for very quick selection of tool bits, that prevents the loss of tool bits through misuse, that provides for a rugged dependable design, that prevents jamming on extension or retraction of the selected tool bit, and minimizes the chance of the tool bits interfering one with another by means of controlling the lateral stiffness of the tool bit extensions.

After the sub-title SUMMARY OF THE INVENTION, please insert the following paragraphs:

In accordance with one aspect of the present invention there is disclosed a novel multi-bit driver comprising longitudinal housing including a bit chuck having a tool bit

receiving channel, and plurality of actuator channels, and defining a longitudinal axis. A plurality of tool bits are nested within the housing in a retracted position. An actuating means is for selectively extending the tool bits from the retracted position to an extended position whereat the selected tool bit projects from the tool bit receiving channel, and retracting the selected tool bit from the extended position to the retracted position. The bit chuck precludes the tool bit from rotating axially when in the extended position. A locking means is for locking the tool bit in the extended position. Each actuating means is adapted to be easily deflected in a radial direction with respect to the longitudinal axis and resists deflection in a transverse direction relative thereto, to operably align the selected tool bit with the tool bit receiving channel as the tool bit is urged into the extended position.

In accordance with another aspect of the present invention there is disclosed a novel multi-bit driver comprises a longitudinal housing including a bit chuck having a tool bit receiving channel, and a plurality of actuator channels, and defining a longitudinal axis. A plurality of bit assemblies each including a tool bit are incorporated in the housing. An actuating means is for selectively extending tool bits from the retracted position to an extended position whereat the selected tool bit projects from the a tool bit receiving channel, and retracting the selected tool bit from the extended position to the retracted position. The bit chuck precludes the tool bit

from rotating axially when in the extended position. A locking means is for locking the tool bit in the extended position. Each bit assembly is adapted to be easily deflected in a radial direction with respect to the longitudinal axis and resists deflection in a transverse direction relative thereto, to operably align the selected tool bit with the tool bit receiving channel as the tool bit is urged into the extended position.

Please replace paragraph [0059] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

[0059] The present invention, a multi-bit driver shown generally as 30 includes the following major components which are depicted in Figures 1, 2 and 3. The multi-bit driver 30 includes a longitudinal housing 31 defining a longitudinal axis, a cone 34, a collar 36, and a bit cartridge 50 which includes bit guide 41.

Please replace paragraph [0061] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

[0061] Housing 31 further includes the cone 34 as an integral part thereof, with the cone 34 having an externally threaded bit chuck 80 at the chuck end 39. The bit chuck 80 has a hexagonal tool bit receiving channel 89, that receives the co-operatingly shaped hexagonal profile tool bits 52. In this manner, the bit

chuck 80 precludes the tool bit 54 from rotating axially when in the extended position. Of course, other shapes of tool bit shanks, could be used, including other multi-faceted shapes, round shanks with keys, and so on. An internally threaded collar 36 threadably engages the bit chuck 80. Internal threads 68 proximate barrel end 37 of the bit chuck 80 engage the co-operating external threads 66 on the housing 31 to thereby retain the cone 34 on the barrel 32. Additionally, locking screws 35 are used. The cone 34, also has an interior guide surface 110 disposed between the retracted tool bits 52 and the bit chuck 80, for slidably guiding the tool bits 52 into alignment with the bit chuck 80 when the tool bits 52 are urged into their extended position.

Please replace paragraph [0064] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

Bit guide 41 is best seen in Figure 1, includes guide support 42 having connected at one end thereof guide 40 and at the other end, end cap 38 having a screw 44 connecting guide support 42 to cap end 38, wherein cap end 38 has cap threads 46 which are threadably received by threads 62 of cap end 60 of barrel 38. Bit assemblies 100 are connected to barrel 32 via actuator knob 72 having integrally connected therewith a knob fastener portion 74 for slidably fastening bit assembly 100 to barrel 32 of the housing 31 through an actuator channel 70. The actuator knob 72 is thereby also a fastening means.

After paragraph [0065] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, please insert the following two new paragraphs:

There is also an actuating means for selectively extending the tool bits from the retracted position to an extended position. In the extended position, as can be best seen in Figures 2, 4, 7, and 10, the selected tool bit projects from the tool bit receiving channel 89. The actuating means is also for retracting the selected tool bit from the extended position to the retracted position, whereat the tool bit is fully nested within the housing.

Each actuating means includes a bit extension 54 operably connected at one end to one of the tool bits 52. At the other end, each bit extension 54 is operably slidably connected to the housing 31, by the actuator knobs 72, as described above. In this manner, each bit assembly is guided slidably along an actuator channel 70. Each of the actuating means, and more specifically the bit extensions 54, are adapted to be easily deflected in a radial direction with respect to the longitudinal axis and resists deflection in a transverse direction relative thereto. In this manner, the selected tool bit 52 is operably aligned with the tool bit receiving channel 89, as the tool bit 52 is urged to the extended position. Preferably, the actuating means are flexible, but they may also be adapted to be easily deflected in other suitable manners. As

can be seen in the figures, the bit extension 54 is flat, and has a planar profile with a width greater than its thickness. Preferably, the bit extension has a thickness to width ratio of at least 1 : 1.5, and even more preferably a thickness to width ratio of at least 1 : 3.0. By having the actuating means adapted to be easily deflected in a radial direction with respect to the longitudinal axis and resistive deflection in a transverse direction relative thereto, the actuating means operably aligns the selected tool bit 52 with the tool bit receiving channel 89 as the tool bit 52 urged into the extended position.

Please replace paragraph [0068] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraphs:

In order for the multi-bit driver 30 to function properly, the bit assemblies 100 (bit extension 54, connector 56, and bit 52) must have certain properties. The bit extension 54 or the bit connector 52, or both together, must act as a hinge, that is, one or both must be flexible in the radial direction and stiffer relative thereto in the transverse direction in accordance with the classic hinge design, in order to deliver the tool bit 52 in the proper angular and rotational orientation to the bit chuck 80. The radial flexibility can be at single point or node or at an infinite series of points or nodes across the bit extension 54 or the bit connector 56 (in other words, as a hinge, or a pivot, or a flexural or living

hinge structure. The bit extension 54 as a living hinge or a flexural hinge itself must be made of a resiliently flexible material which allows for elastic bending of bit extension portion 54 along its entire length. In this regard, many plastics are suitable including polypropylene, NylonTM, TeflonTM, VinylTM and like plastic materials. The bit extension 54 can be made as a separate piece joined to the tool bit 52 by the bit connector 56 or it can be overmolded onto the tool bit 52, such that the bit extension 54 and the bit connector 56 comprise one and the same flexural unit and function as a living hinge. The bit extension 54 alone or in conjunction with the bit connector 56, as a hinge (from a single node or pivot to an infinite series of points or nodes across a flexural hinge), has memory properties which ensure that the tool bit 52 is always delivered to the bit chuck 80 in similar angular and rotational orientation to ensure it is aligned properly and is slidably received through the bit chuck 80. The bit extension 54 can also be made with the same material as the tool bit 52, that is, both with steel. The bit connector 56 alone would be used as the hinge in this case as the bit extension 54 would be made in rigid steel. One form of this hinge could be a short living hinge. The bit extension 54 and the tool bit 52 can be integrally manufactured together by overmolding the bit connector 56 over the steel manufactured version of the bit extension 54 and the tool bit 52. The bit connector 56, in this case, could be a shrink wrap type of material or an overmolded polypropylene, NylonTM, TeflonTM, VinylTM and like plastic materials, to act as a shorter living hinge structure or pivot

at the point of connection. It is apparent that there are a number of hinging mechanisms that can provide for control of the delivery orientation of each bit assembly 100, that each provides for easy deflection in a radial direction and resists deflection in a transverse direction, that such mobility and orientation control is achieved either at a single point or node (at bit connector 56) or along multiple nodes over the length of a shaft or flexural (bit extension 54 or bit extension 54 and bit connector 56)).

It can therefore be readily seen that each bit assembly 100 is adapted to be easily deflected in a radial direction with respect to the longitudinal axis of the multi-bit driver 30, and resists deflection in a transverse direction relative to the longitudinal axis, to operably align the selected tool bit 52 with the tool bit receiving channel 89 as the tool bit 52 is urged into the extended position.

Please replace paragraph [0074] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

Once cone 34 is in place, steel ball 82 is placed into a counter sink 81 located in bit chuck 80 and collar 36 is threadably attached to chuck end 39 until tapered surface 84, makes contact with steel ball 82. This completes the assembly of multi-bit driver 30. The steel ball 82 is a locking member that is part of a locking means that also comprises the locking

groove 90 in each tool bit 52, and is for locking the tool bit 52 in the extended position, as will be discussed in greater detail subsequently.

Please replace paragraph [0077] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

As shown in Figure 14, as actuator knob 72 is moved with simple finger pressure longitudinally along actuator channel 70 such that, head end 112 and/or driver head 104 of tool bit 52 makes contact with the interior guide surface 110 of cone 34. Tool bit 52 is guided into and enters ~~chuck~~ tool bit receiving channel 89. As actuator knob 72 continues to be urged upwardly along actuator channel 70, tool bit 52 slidably moves along guide surface 110 thereby flexing bit extension 54 as tool bit 52 moves closer to ~~chuck~~ tool bit receiving channel 89. Finally, tool bit 52 enters ~~chuck~~ tool bit receiving channel 89 and is aligned with longitudinal axis 99 of housing 31. Tool bit 52 should be substantially aligned longitudinally with housing 32 in order to be able to usefully employ multi-bit driver 30.

Please replace paragraph [0078] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

Tool bits 52 normally have an exterior hexagonal profile and the ~~chuck~~ tool bit receiving channel 89 is of a

cooperating hexagonal shape. The flat longitudinally aligned bit extension 54 sliding along guide faces 43 on guide 40 serve to align tool bit 52 exactly with ~~chuck~~ tool bit receiving channel 89 such that tool bit 52 is easily and slidably received within ~~chuck~~ tool bit receiving channel 89 anytime it is urged towards ~~chuck~~ tool bit receiving channel 89.

Please replace paragraph [0079] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

By continuing to urge knob fastener 74 upwardly, tool bit 52 passes through ~~chuck~~ tool bit receiving channel 89 until locking groove 90 aligns with steel ball 82 located in counter sink 81 in bit chuck 80. At this point tool bit 52 is aligned with longitudinal axis 99, and is in the extended position 97.

After paragraph [0080] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, please insert the following new paragraph:

As discussed above, the locking means is for locking the tool bit 52 in the extended position, and comprises the steel ball 82 and the locking groove 90.

Please replace paragraph [0081] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

Once locking groove 90 aligns with steel ball 82, collar 36 is threadably engaged and rotated onto bit chuck 80 until tapered surface 84 of collar 36 engages with steel ball 82 forcing it downwardly into countersink 81 so that steel ball 82 makes contact with locking groove 90, thereby locking tool bit 52 rigidly and securely into ~~chuck~~ tool bit receiving channel 89. In this manner, the steel ball 82 is selectively movable into contact with the locking groove 90.

Please replace paragraph [0084] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

Subsequently another tool bit 52 can be selected in the same manner described above and urged forwardly up actuator channel 70 to be put into the working position in ~~chuck~~ tool bit receiving channel 89 as described here above.

Please replace paragraph [0085] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

Description of the ~~Presently Preferred~~ Alternative Embodiment

After paragraph [0095] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, please insert the following new paragraph:

As can be readily discerned from the above disclosure, the multi-bit driver 30 overcomes the disadvantages of the known prior art, due to the fact that the bit extension 54 is adapted to be easily deflected in a radial direction with respect to the longitudinal axis of the housing and resists deflection in a transverse direction relative thereto. Accordingly, the selected tool bit 52 is properly aligned, both angularly and rotationally, with the hexagonal tool bit receiving channel 89 upon movement to the extended position. Also because of the limited motion in the transverse direction, the chances of tangling between the tool bit 52 that is being engaged between other tool bits 52 is dramatically reduced.

IN THE CLAIMS:

Please insert new claims 39 through 80, as follows:

39. A multi-bit driver comprising:

a longitudinal housing including a bit chuck having a tool bit receiving channel, and plurality of actuator channels, and defining a longitudinal axis;

a plurality of tool bits nested within said housing in a retracted position;

actuating means for selectively extending said tool bits from said retracted position to an extended position whereat the selected tool bit projects from said tool bit receiving channel, and retracting the selected tool bit from said extended position to said retracted position;

wherein said bit chuck precludes said tool bit from rotating axially when in said extended position; and,

locking means for locking said tool bit in said extended position;

wherein each said actuating means is adapted to be easily deflected in a radial direction with respect to said longitudinal axis and resists deflection in a transverse direction relative thereto, to operably align the selected tool bit with said tool bit receiving channel as said tool bit is urged into said extended position.

40. The multi-bit driver claimed in claim 39, wherein each said actuating means is flexible.

41. The multi-bit driver claimed in claim 39, wherein each said actuating means includes a bit extension operably connected

at one end to one of said tool bits and at the other end operably slideably connected to said housing, such that said bit extension is guided slidably along said actuator channel.

42. The multi-bit driver claimed in claim 39, wherein said locking means comprises a locking groove in each said tool bit and a locking member selectively movable into contact with said locking groove.

43. The multi-bit driver claimed in claim 42, wherein said locking member comprises a steel ball.

44. The multi-bit driver claimed in claim 39, further comprising fastening means connected to said bit extension for slidably connecting said bit extension to said housing.

45. The multi-bit driver claimed in claim 39, wherein said tool bits are substantially longitudinally aligned with said longitudinal axis when in said extended position.

46. The multi-bit driver claimed in claim 39, wherein said tool bits are substantially longitudinally aligned with said longitudinal axis when in said retracted position.

47. The multi-bit driver claimed in claim 39, wherein said bit extension has a planar profile with a width greater than its thickness.

48. The multi-bit driver claimed in claim 48, wherein said bit extension has a thickness to width ratio of at least 1 : 1.5.

49. The multi-bit driver claimed in claim 48, wherein said bit extension has a thickness to width ratio of at least 1 : 3.0.

50. The multi-bit driver claimed in claim 39, wherein said tool bit has a hexagonally shaped shank and chuck receiving channel of said bit chuck is adapted to receive said hexagonally shaped shank therein.

51. The multi-bit driver claimed in claim 39, wherein said actuating means operates to extend said tool bit by longitudinal motion in one direction and retract said tool bit by longitudinal motion in the opposite direction.

52. The multi-bit driver claimed in claim 51, wherein said longitudinal motion is effected using a single finger or thumb pressure.

53. The multi-bit driver claimed in claim 52, wherein said actuating means comprises an actuator knob partially projecting externally of said housing for the application of finger pressure thereto.

54. The multi-bit driver claimed in claim 39, wherein said housing includes a cone proximate said bit chuck, said cone having an interior guide surface for slidably guiding tool bits into alignment with said bit chuck as tool bits are urged into said extended position.

55. The multi-bit driver claimed in claim 54, wherein said cone is disposed between said retracted tool bits and said bit chuck for guiding tool bits into alignment with said bit chuck as tool bits are urged into said extended position.

56. The multi-bit driver claimed in claim 55, wherein said cone is an integral part of said housing.

57. The multi-bit driver claimed in claim 39, further comprising guide means for maintaining said bit extensions separate one from another and nested proximate the inner surface of said housing, and for guiding said bit extension as said tool bits are urged between said extended and retracted positions.

58. The multi-bit driver claimed in claim 57, wherein said guide means includes a guide including guide faces for slideably receiving said bit assemblies, thereby maintaining said bit assemblies spaced apart within said housing.

59. The multi-bit driver claimed in claim 58, wherein said guide means further comprises a guide support connected at one end to said guide and at an opposite other end to an end cap.

60. A multi-bit driver comprising:

a longitudinal housing including a bit chuck having a tool bit receiving channel, and a plurality of actuator channels, and defining a longitudinal axis;

a plurality of bit assemblies each including a tool bit, said bit assemblies incorporated in said housing;

actuating means for selectively extending tool bits from said retracted position to an extended position whereat the selected tool bit projects from said a tool bit receiving channel, and retracting the selected tool bit from said extended position to said retracted position;

wherein said bit chuck precludes said tool bit from rotating axially when in said extended position; and,

locking means for locking said tool bit in said extended position;

wherein each said bit assembly is adapted to be easily deflected in a radial direction with respect to said longitudinal axis and resists deflection in a transverse direction relative thereto, to operably align the selected tool bit with said tool bit receiving channel as said tool bit is urged into said extended position.

61. The multi-bit driver claimed in claim 60, wherein each said bit assembly includes a bit extension operably connected at one end to one of said tool bit and at the other end operably slideably connected to said housing, such that said bit extension is guided slidably along said actuator channel.

62. The multi-bit driver claimed in claim 60, wherein said bit chuck has a chuck receiving channel.

63. The multi-bit driver claimed in claim 60, wherein said locking means comprises a locking groove in each said tool bit and a locking member selectively movable into contact with said locking groove.

64. The multi-bit driver claimed in claim 63, wherein said locking member comprises a steel ball.

65. The multi-bit driver claimed in claim 60, further comprising fastening means connected to said bit extension for slidably connecting said bit extension to said housing.

66. The multi-bit driver claimed in claim 60, wherein said tool bits are substantially longitudinally aligned with said longitudinal axis when in said extended position.

67. The multi-bit driver claimed in claim 60, wherein said tool bits are substantially longitudinally aligned with said longitudinal axis when in said retracted position.

68. The multi-bit driver claimed in claim 60, wherein said bit extension has a planar profile with a width greater than its thickness.

69. The multi-bit driver claimed in claim 68, wherein said bit extension has a thickness to width ratio of at least 1 : 1.5.

70. The multi-bit driver claimed in claim 69, wherein said bit extension has a thickness to width ratio of at least 1 : 3.0.

71. The multi-bit driver claimed in claim 60, wherein said tool bit has a hexagonally shaped shank and chuck receiving channel of said bit chuck is adapted to receive said hexagonally shaped shank therein.

72. The multi-bit driver claimed in claim 60, wherein said actuating means operates to extend said tool bit by longitudinal motion in one direction and retract said tool bit by longitudinal motion in the opposite direction.

73. The multi-bit driver claimed in claim 72, wherein said longitudinal motion is effected using a single finger or thumb pressure.

74. The multi-bit driver claimed in claim 73, wherein said actuating means comprises an actuator knob partially projecting externally of said housing for the application of finger pressure thereto.

75. The multi-bit driver claimed in claim 60, wherein said housing includes a cone proximate said bit chuck, said cone having an interior guide surface for slidably guiding tool bits into alignment with said bit chuck as tool bits are urged into said extended position.

76. The multi-bit driver claimed in claim 75, wherein said cone is disposed between said retracted tool bits and said bit chuck for guiding tool bits into alignment with said bit chuck as tool bits are urged into said extended position.

77. The multi-bit driver claimed in claim 76, wherein said cone is an integral part of said housing.

78. The multi-bit driver claimed in claim 60, further comprising guide means for maintaining said bit extensions separate one from another and nested proximate the inner surface of said housing, and for guiding said bit extension as said tool bits are urged between said extended and retracted positions.

79. The multi-bit driver claimed in claim 78, wherein said guide means includes a guide including guide faces for slideably

receiving said bit assemblies, thereby maintaining said bit assemblies spaced apart within said housing.

80. The multi-bit driver claimed in claim 79, wherein said guide means further comprises a guide support connected at one end to said guide and at an opposite other end to an end cap.

APPENDIX "A"

Please replace paragraph [0059] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

[0059] The present invention, a multi-bit driver shown generally as 30 includes the following major components which are depicted in Figures 1, 2 and 3. The multi-bit driver 30 includes a longitudinal housing 31 defining a longitudinal axis, (P.14,L.13) a cone 34, a collar 36, and a bit cartridge 50 which includes bit guide 41.

Please replace paragraph [0061] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

[0061] Housing 31 further includes the cone 34 as an integral part thereof (P.8,L.19), with the cone 34 having an externally threaded bit chuck 80 at the chuck end 39. The bit chuck 80 has a hexagonal tool bit receiving channel 89, that receives the co-operatingly shaped hexagonal profile tool bits 52. In this manner, the bit chuck 80 precludes the tool bit 54 from rotating axially when in the extended position. Of course, other shapes of tool bit shanks, could be used, including other multi-faceted shapes, round shanks with keys, and so on. An internally threaded collar 36 threadably engages the bit chuck 80. Internal threads 68 proximate barrel end 37 of the bit chuck 80

engage the co-operating external threads 66 on the housing 31 to thereby retain the cone 34 on the barrel 32. Additionally, locking screws 35 are used. The cone 34, also has an interior guide surface 110 disposed between the retracted tool bits 52 and the bit chuck 80, for slidably guiding the tool bits 52 into alignment with the bit chuck 80 when the tool bits 52 are urged into their extended position. (P.6,L.3-5)

Please replace paragraph [0064] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

Bit guide 41 is best seen in Figure 1, includes guide support 42 having connected at one end thereof guide 40 and at the other end, end cap 38 having a screw 44 connecting guide support 42 to cap end 38, wherein cap end 38 has cap threads 46 which are threadably received by threads 62 of cap end 60 of barrel 38. Bit assemblies 100 are connected to barrel 32 via actuator knob 72 having integrally connected therewith a knob fastener portion 74 for slidably fastening bit assembly 100 to barrel 32 of the housing 31 through an actuator channel 70. The actuator knob 72 is thereby also a fastening means.

After paragraph [0065] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, please insert the following two new paragraphs:

There is also an actuating means for selectively extending the tool bits from the retracted position to an extended position. In the extended position, as can be best seen in Figures 2, 4, 7, and 10, the selected tool bit projects from the tool bit receiving channel 89. The actuating means is also for retracting the selected tool bit from the extended position to the retracted position, whereat the tool bit is fully nested within the housing. (P.4,L.4-7)

Each actuating means includes a bit extension 54 operably connected at one end to one of the tool bits 52. At the other end, each bit extension 54 is operably slidably connected to the housing 31, by the actuator knobs 72, as described above.(Figures) In this manner, each bit assembly is guided slidably along an actuator channel 70.(P.5,L.14-15; P.10,L.6; CL.10) Each of the actuating means, and more specifically the bit extensions 54, are adapted to be easily deflected in a radial direction with respect to the longitudinal axis and resists deflection in a transverse direction relative thereto. In this manner, the selected tool bit 52 is operably aligned with the tool bit receiving channel 89, as the tool bit 52 is urged to the extended position (P.14,L.18 to P.15,L.1; and Figures). Preferably, the actuating means are flexible, but they may also be adapted to be easily deflected in other suitable manners. As can be seen in the figures, the bit extension 54 is flat (P.14,L.18 to P.15,L.1; and Figures), and has a planar profile with a width greater than its thickness. Preferably, the bit extension has a thickness to width ratio of

at least 1 : 1.5, and even more preferably a thickness to width ratio of at least 1 : 3.0. (Figures) By having the actuating means adapted to be easily deflected in a radial direction with respect to the longitudinal axis and resistive deflection in a transverse direction relative thereto, the actuating means operably aligns the selected tool bit 52 with the tool bit receiving channel 89 as the tool bit 52 urged into the extended position. (P.14,L.18 to P.15,L.1; and Figures)

Please replace paragraph [0068] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraphs:

In order for the multi-bit driver 30 to function properly, the bit assemblies 100 (bit extension 54, connector 56, and bit 52) must have certain properties. The bit extension 54 or the bit connector 52, or both together, must act as a hinge, that is, one or both must be flexible in the radial direction and stiffer relative thereto in the transverse direction in accordance with the classic hinge design, in order to deliver the tool bit 52 in the proper angular and rotational orientation to the bit chuck 80. The radial flexibility can be at single point or node or at an infinite series of points across the bit extension 54 or the bit connector 56 (in other words, as a hinge, or a pivot, or a flexural or living hinge structure. The bit extension 54 as a living hinge or a flexural hinge itself must be made of a resiliently flexible material which allows for elastic bending of bit extension portion 54

along its entire length.(P.14,L18 to P.15,L.1; Figures) In this regard, many plastics are suitable including polypropylene, NylonTM, TeflonTM, VinylTM and like plastic materials.(P.11,L.2-4) The bit extension 54 can be made as a separate piece joined to the tool bit 52 by the bit connector 56 or it can be overmolded onto the tool bit 52, such that the bit extension 54 and the bit connector 56 comprise one and the same flexural unit and function as a living hinge. The bit extension 54 alone or in conjunction with the bit connector 56, as a hinge (from a single node or pivot to an infinite series of points or nodes across a flexural hinge), has memory properties which ensure that the tool bit 52 is always delivered to the bit chuck 80 in similar angular and rotational orientation to ensure it is aligned properly and is slidably received through the bit chuck 80.(P.11,L.5-7) The bit extension 54 can also be made with the same material as the tool bit 52, that is, both with steel.(P.11,L.11-12) The bit connector 56 alone would be used as the hinge in this case as the bit extension 54 would be made in rigid steel. One form of this hinge could be a short living hinge. The bit extension 54 and the tool bit 52 can be integrally manufactured together by overmolding the bit connector 56 over the steel manufactured version of the bit extension 54 and the tool bit 52. The bit connector 56, in this case, could be a shrink wrap type of material or an overmolded polypropylene, NylonTM, TeflonTM, VinylTM and like plastic materials, to act as a shorter living hinge structure or pivot at the point of connection.(P.11,FIRST PARAGRAPH) It is apparent that there are a number of hinging mechanisms that can provide

for control of the delivery orientation of each bit assembly 100, that each provides for easy deflection in a radial direction and resists deflection in a transverse direction, that such mobility and orientation control is achieved either at a single point or node (at bit connector 56) or along multiple nodes over the length of a shaft or flexural (bit extension 54 or bit extension 54 and bit connector 56)).(p.5,l.8-11; P.14,L.18 to P.15,L.1; and Figures)

It can therefore be readily seen that each bit assembly 100 is adapted to be easily deflected in a radial direction with respect to the longitudinal axis of the multi-bit driver 30, and resists deflection in a transverse direction relative to the longitudinal axis, to operably align the selected tool bit 52 with the tool bit receiving channel 89 as the tool bit 52 is urged into the extended position.

Please replace paragraph [0074] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

Once cone 34 is in place, steel ball 82 is placed into a counter sink 81 located in bit chuck 80 and collar 36 is threadably attached to chuck end 39 until tapered surface 84, makes contact with steel ball 82. This completes the assembly of multi-bit driver 30. The steel ball 82 is a locking member that is part of a locking means that also comprises the locking groove 90 in each tool bit 52 (P.15,L.12-15), and is for locking

the tool bit 52 in the extended position, as will be discussed in greater detail subsequently.

Please replace paragraph [0077] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

As shown in Figure 14, as actuator knob 72 is moved with simple finger pressure longitudinally along actuator channel 70 such that, head end 112 and/or driver head 104 of tool bit 52 makes contact with the interior guide surface 110 of cone 34. Tool bit 52 is guided into and enters ~~chuck~~ tool bit receiving channel 89. As actuator knob 72 continues to be urged upwardly along actuator channel 70, tool bit 52 slidably moves along guide surface 110 thereby flexing bit extension 54 as tool bit 52 moves closer to ~~chuck~~ tool bit receiving channel 89. Finally, tool bit 52 enters ~~chuck~~ tool bit receiving channel 89 and is aligned with longitudinal axis 99 of housing 31. Tool bit 52 should be substantially aligned longitudinally with housing 32 in order to be able to usefully employ multi-bit driver 30.

After paragraph [0080] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, please insert the following new paragraph:

As discussed above, the locking means is for locking the tool bit 52 in the extended position, and comprises the steel ball 82 and the locking groove 90.

Please replace paragraph [0081] in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT, with the following rewritten paragraph:

Once locking groove 90 aligns with steel ball 82, collar 36 is threadably engaged and rotated onto bit chuck 80 until tapered surface 84 of collar 36 engages with steel ball 82 forcing it downwardly into countersink 81 so that steel ball 82 makes contact with locking groove 90, thereby locking tool bit 52 rigidly and securely into ~~chuck~~ tool bit receiving channel 89. In this manner, the steel ball 82 is selectively movable into contact with the locking groove 90.(P.15,L.14-15)

39. A multi-bit driver comprising: (P.4.,L.1)

a longitudinal housing including a bit chuck (P.4,L.2) having a tool bit receiving channel (P.14,L.10), and plurality of actuator channels (P.5,L.14), and defining a longitudinal axis (P.14,L.13);

a plurality of tool bits nested within said housing in a retracted position (P.4,L.3);

actuating means for selectively extending said tool bits from said retracted position to an extended position whereat the selected tool bit projects from said tool bit

receiving channel, and retracting the selected tool bit from said extended position to said retracted position;(P.4,L.4-7)

wherein said bit chuck precludes said tool bit from rotating axially when in said extended position; and, (Figures)

locking means for locking said tool bit in said extended position; (P.4,L.8)

wherein each said actuating means is adapted to be easily deflected in a radial direction with respect to said longitudinal axis and resists deflection in a transverse direction relative thereto, to operably align the selected tool bit with said tool bit receiving channel as said tool bit is urged into said extended position. (P.14,L.18 to P.15,L1 and Figures)

40. The multi-bit driver claimed in claim 39, wherein each said actuating means is flexible. (P.11,L.2)

41. The multi-bit driver claimed in claim 39, wherein each said actuating means includes a bit extension operably connected at one end to one of said tool bits and at the other end operably slideably connected to said housing, such that said bit extension is guided slidably along said actuator channel. (Figures)

42. The multi-bit driver claimed in claim 39, wherein said locking means comprises a locking groove in each said tool bit and a locking member selectively movable into contact with said locking groove. (P.15,L.12-15)

43. The multi-bit driver claimed in claim 42, wherein said locking member comprises a steel ball. (P.15,L.12-15)

44. The multi-bit driver claimed in claim 39, further comprising fastening means connected to said bit extension for slidably connecting said bit extension to said housing. (P.5,L.14-15; P.10,L.6; CL.10)

45. The multi-bit driver claimed in claim 39, wherein said tool bits are substantially longitudinally aligned with said longitudinal axis when in said extended position. (P.4,L.6-7)

46. The multi-bit driver claimed in claim 39, wherein said tool bits are substantially longitudinally aligned with said longitudinal axis when in said retracted position. (P.11,L.15-16)

47. The multi-bit driver claimed in claim 39, wherein said bit extension has a planar profile with a width greater than its thickness. (P.14,L.18 and Figures)

48. The multi-bit driver claimed in claim 48, wherein said bit extension has a thickness to width ratio of at least 1 : 1.5. (Figures)

49. The multi-bit driver claimed in claim 48, wherein said bit extension has a thickness to width ratio of at least 1 : 3.0. (Figures)

50. The multi-bit driver claimed in claim 39, wherein said tool bit has a hexagonally shaped shank and tool bit receiving channel of said bit chuck is adapted to receive said hexagonally shaped shank therein. (P.14,L.17-18)

51. The multi-bit driver claimed in claim 39, wherein said actuating means operates to extend said tool bit by longitudinal motion in one direction and retract said tool bit by longitudinal motion in the opposite direction. (P.5,L.1-3)

52. The multi-bit driver claimed in claim 51, wherein said longitudinal motion is effected using a single finger or thumb pressure. (P.5,L.5-6)

53. The multi-bit driver claimed in claim 52, wherein said actuating means comprises an actuator knob partially projecting externally of said housing for the application of finger pressure thereto. (P.5,L.18)

54. The multi-bit driver claimed in claim 39, wherein said housing includes a cone proximate said bit chuck, said cone having an interior guide surface for slidably guiding tool bits into alignment with said bit chuck as tool bits are urged into said extended position. (P.6,L.3-5)

55. The multi-bit driver claimed in claim 54, wherein said cone is disposed between said retracted tool bits and said bit chuck for guiding tool bits into alignment with said bit chuck as tool bits are urged into said extended position. (Figures)

56. The multi-bit driver claimed in claim 55, wherein said cone is an integral part of said housing. (P.8,L.19)

57. The multi-bit driver claimed in claim 39, further comprising guide means for maintaining said bit extensions separate one from another and nested proximate the inner surface of said housing, and for guiding said bit extension as said tool bits are urged between said extended and retracted positions. (P.6,L.7-9)

58. The multi-bit driver claimed in claim 57, wherein said guide means includes a guide including guide faces for slideably receiving said bit assemblies, thereby maintaining said bit assemblies spaced apart within said housing. (P.10,L.8)

59. The multi-bit driver claimed in claim 58, wherein said guide means further comprises a guide support connected at one

end to said guide and at an opposite other end to an end cap. (P.10,L.1-2)

60. A multi-bit driver comprising: (P.4,L.1)

a longitudinal housing including a bit chuck (P.4,L.2) having a tool bit receiving channel (P.14,L.10), and a plurality of actuator channels (P.5,L.14), and defining a longitudinal axis (P.14,L.13);

a plurality of bit assemblies each including a tool bit, said bit assemblies incorporated in said housing; (P.4,L.3)

actuating means for selectively extending tool bits from said retracted position to an extended position whereat the selected tool bit projects from said a tool bit receiving channel, and retracting the selected tool bit from said extended position to said retracted position; (P.4,L.4-7)

wherein said bit chuck precludes said tool bit from rotating axially when in said extended position; and, (Figures)

locking means for locking said tool bit in said extended position; (P.4,L.8)

wherein each said bit assembly is adapted to be easily deflected in a radial direction with respect to said longitudinal axis and resists deflection in a transverse

direction relative thereto, to operably align the selected tool bit with said tool bit receiving channel as said tool bit is urged into said extended position. (P.5,L.8-11;P.14,L.18 to P.15,L.1 and Figures)

61. The multi-bit driver claimed in claim 60, wherein each said bit assembly includes a bit extension operably connected at one end to one of said tool bit and at the other end operably slideably connected to said housing, such that said bit extension is guided slidably along said actuator channel. (P.5,L.8-11; P.5,L.18-P.6,L.1; Figures)

62. The multi-bit driver claimed in claim 60, wherein said bit chuck has a tool bit receiving channel. (P.14,L.7-13)

63. The multi-bit driver claimed in claim 60, wherein said locking means comprises a locking groove in each said tool bit and a locking member selectively movable into contact with said locking groove. (P.15,L.12-15)

64. The multi-bit driver claimed in claim 63, wherein said locking member comprises a steel ball. (P.15,L.12-15)

65. The multi-bit driver claimed in claim 60, further comprising fastening means connected to said bit extension for slidably connecting said bit extension to said housing. (P.5,L.14-15; P.10,L.6; CL.6)

66. The multi-bit driver claimed in claim 60, wherein said tool bits are substantially longitudinally aligned with said longitudinal axis when in said extended position. (P.4,L.6-7

67. The multi-bit driver claimed in claim 60, wherein said tool bits are substantially longitudinally aligned with said longitudinal axis when in said retracted position. (P.11,L.15-16)

68. The multi-bit driver claimed in claim 60, wherein said bit extension has a planar profile with a width greater than its thickness. (P.14,L.18; Figures)

69. The multi-bit driver claimed in claim 68, wherein said bit extension has a thickness to width ratio of at least 1 : 1.5. (Figures)

70. The multi-bit driver claimed in claim 69, wherein said bit extension has a thickness to width ratio of at least 1 : 3.0. (Figures)

71. The multi-bit driver claimed in claim 60, wherein said tool bit has a hexagonally shaped shank and tool bit receiving channel of said bit chuck is adapted to receive said hexagonally shaped shank therein. (P.14,L.17-18)

72. The multi-bit driver claimed in claim 60, wherein said actuating means operates to extend said tool bit by longitudinal

motion in one direction and retract said tool bit by longitudinal motion in the opposite direction. (P.5,L.1-3)

73. The multi-bit driver claimed in claim 72, wherein said longitudinal motion is effected using a single finger or thumb pressure. (P.5,L.5-6)

74. The multi-bit driver claimed in claim 73, wherein said actuating means comprises an actuator knob partially projecting externally of said housing for the application of finger pressure thereto. (P.5,L.18)

75. The multi-bit driver claimed in claim 60, wherein said housing includes a cone proximate said bit chuck, said cone having an interior guide surface for slidably guiding tool bits into alignment with said bit chuck as tool bits are urged into said extended position. (P.6,L.3-5)

76. The multi-bit driver claimed in claim 75, wherein said cone is disposed between said retracted tool bits and said bit chuck for guiding tool bits into alignment with said bit chuck as tool bits are urged into said extended position. (Figures)

77. The multi-bit driver claimed in claim 76, wherein said cone is an integral part of said housing. (P.8,L.19)

78. The multi-bit driver claimed in claim 60, further comprising guide means for maintaining said bit extensions

separate one from another and nested proximate the inner surface of said housing, and for guiding said bit extension as said tool bits are urged between said extended and retracted positions. (P.6,L.7-9)

79. The multi-bit driver claimed in claim 78, wherein said guide means includes a guide including guide faces for slideably receiving said bit assemblies, thereby maintaining said bit assemblies spaced apart within said housing. (P.10,L.8)

80. The multi-bit driver claimed in claim 79, wherein said guide means further comprises a guide support connected at one end to said guide and at an opposite other end to an end cap. (P.10,L.1-2)